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P A P E R S

IN

A G R I C U L T U R E.

The GOLD MEDAL was this Session adjudged to A. BAIN, M. D. of Curzon-Street, for his Plantations of Forest Trees made at Heffleton, in Dorsetshire. The following Communications were received from him.

DEAR SIR,

ABOUT three years ago, I had the honour to communicate to the Society of Arts, an account of some Plantations I had made at Heffleton, in Dorsetshire, and on that occasion my success was rewarded by the Honorary Premium of the Society. As you have seen and reported the flourishing condition of those Plantations, I will proceed to state, that I have been induced by various motives, and encouraged by the Society's approbation, to make farther exertions in the same line of improvement, by covering such parts of my

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estate

estate as are not adapted *to the purposes of husbandry*, with trees that are suited to the nature of the soil. My enclosures were multiplied, and on a large extent of heath land, exceeding one hundred and twenty-five statute acres, which had been previously well-fenced from the depredations of Sheep and Cattle, and where holes at $4\frac{1}{2}$ by 5 feet asunder, had been made in the manner particularly described in my last communication. I began to plant in the Autumn of 1807. Between the 25th September of that year, and the 30th of April, 1808, I planted out on that ground 258,519 trees, as specified in the following List :—

Scotch Fir,	-	249,700
Pinaster,	-	5,410
Larch,	-	2,150
Spruce,	-	1,259

The greater part of those Trees had been raised from seed in my own Nursery, where they had been also transplanted, and were finally planted out some at two, and others at three years old.

The soil of this Plantation is gravelly and poor, the situation rather elevated, and a good deal exposed to the influence of the sea winds from the south coast ; yet in spite of those circumstances, the young trees are in a very healthy thriving state, as you will see attested by two Gentlemen who live in my neighbourhood, who are Planters themselves, and well qualified to judge accurately on subjects of this kind. It is my intention to fill up this and all my fir plantations with Pinaster only, as on such soils and exposures it is the best nurse for the others ; it grows most rapidly, is quite regardless of the sea winds, and is also when ripe a tree
of

of considerable value. A passage in Mr. Kent's Survey of Norfolk, published in 1796, first attracted my attention to this tree, and an intimate acquaintance with it since that period had increased my opinion of its good qualities. In the latter end of the year 1798, I planted out some Pinaster seedlings of one year old on very poor ground. My Gardener measured three of those trees in the course of the present month, and their dimensions will be found by referring to the following table. Some Larch of three years old were planted out at the same time, but on land of a better quality, yet not exceeding the rate of five shillings an acre per annum. The growth of the Larch is also noted in the table.

	Circumference at the ground.		Circumference 3 feet above the ground.		Circumference 6 feet above the ground.		Height.	
	Feet.	Inch.	Feet.	Inch.	Feet.	Inch.	Feet.	Inch.
Pinaster,								
No. 1.	3	0	2	4	1	10	20	0
No. 2.	2	8	2	0	1	4	17	0
No. 3.	2	5	1	10	1	4	18	3
Larch,								
No. 1.	3	0	2	0	1	7	24	6
No. 2.	2	6	1	9	1	6	23	9
No. 3.	2	5	1	8	1	5	23	11

It is ascertained, I believe, that the wood of Larch in a favourable situation comes to perfection at forty years old, that of Pinaster at sixty, and that of Scotch Fir at eighty years growth. Having planted between five and six hundred statute acres, chiefly with these three species of fir, I will leave to others the calculation of their probable value at the different periods of their fall, and I trust the Society will agree with me in thinking, that such land as I have de-

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scribed,

scribed, could not have been cultivated to equal advantage in any other way.

With my warmest wishes for the prosperity of the Society,

I am, Dear Sir,

Your very faithful and obliged Servant,

A. BAIN.

Curzon-Street, Nov. 27, 1810.

TO C. TAYLOR, M. D. SEC.

DEAR SIR,

WHEN the communication for the Society of Arts which I addressed to you last week was drawn out from my papers, I was confined to my bed by severe indisposition, or I should have called to your recollection that the plantation there described, was not the only one I made in the course of the Autumn 1807. On a piece of land exceeding twelve statute acres, which had once been under the plough, but which my tenant wished to give up as little calculated for the purposes of husbandry, I planted 13,100 Ash, 8,150 Hasel, 4,560 Oak, 3,675 Laburnum, 2,000 Sycamore, with a proportion of Birch, &c. You inspected the plantation with me two years ago, and at that time it had a most promising appearance. On viewing it, however, in the month of October last, those hopes were not found to be realized; for the ash, which was the principal plant, was by no means in a thriving state. I have given directions to my Gardener to cut down the ash plants within an inch of the ground, to cut drains in the lower parts of the field where they were chiefly

chiefly planted, to replace such as are dead with birch, or in better spots with chesnut and oak, and to mix Scotch fir with the deciduous trees, for the purpose of promoting shelter and warmth throughout the plantation. I may probably hereafter take an opportunity of acquainting the Society with the success of those means in improving the appearance of this plantation, to which I have now drawn your attention, because I have reason to know that the Society of Arts, with that liberality and sound judgment which characterize all their proceedings, encourage exertion as well as success; and although it is on the latter I presume to ground my claim to the honorary reward of the Society, yet the former, I am well persuaded, will not be overlooked.

I am, Dear Sir,
Your most obedient humble Servant,

A. BAIN.

Curzon-Street, Dec. 13, 1810.

TO C. TAYLOR, M. D. SEC.

TREES planted by RICHARD VINCENT, from the 25th of September, 1807, to the 30th of April, 1808, on a large quantity of Heath Land, being nearly two thousand trees to each acre.

The trees were mostly taken out of Dr. Bain's Nursery, and were well-rooted plants.

Scotch Fir, 249,700,	Pinaster, 5,410,
Spruce, 1,259,	Larch, 2,150.

RICHARD VINCENT,
Gardener and Nurseryman to
Dr. BAIN.

Haffleton, Oct. 5, 1810.

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CERTIFICATES

CERTIFICATES *by the Right Hon. NATHANIEL BOND, and THOMAS BARTLETT. Esq. respecting Dr. BAIN's Plantation.*

WE desire to certify, that we have examined the land stated to have been planted as above, by Dr. Bain, at Hefleton, between the 25th of September, 1807, and the 30th of April, 1808, that it is not fit for the purposes of husbandry, that it is thoroughly well-fenced from sheep and cattle, and that the trees are generally in a healthy thriving state.

NATHANIEL BOND,

THOMAS BARTLETT.

Hefleton, Oct. 5, 1810.

The GOLD MEDAL, being the Premium offered in Class 3, for raising Oaks, was this Session adjudged to HENRY ANDREWS, Esq. of Wakefield, from whom the following Communications were received.

SIR,

UNDERSTANDING that the Society of Arts, &c. give Premiums for the encouragement of Planting, I am induced to take the liberty of sending you an account of Trees planted by me, on my estate at Kirkby-cum-Osgodby, near Rasen, in the county of Lincoln, which I hope will prove satisfactory to the Society. The oaks under article No. 3, seem to have a particular claim, as I have planted twenty-two thousand

thousand of them in the space of two years. The soil is of a very deep sandy nature, and not calculated to pay the expense of tillage. The plantations are fenced by a very thick and high sod wall.

Inclosed I send you a Certificate from my Gardener, J. Smith, of the trees planted there, with the numbers, sorts, and ages; also a certificate of two respectable witnesses, who have examined the plantations very lately, the one is a Catholic priest, the other a considerable farmer. Twelve thousand of the oaks were planted in February and March, 1809, amongst other forest trees in the plantation containing 36 acres, 3 rods, 10 perches; none of them are less than four, and many of them five years old. The remaining ten thousand oaks were planted in like manner in 1810, in a plantation containing 42 acres, 1 rod, and are three and four years old; the whole of the 218,760 trees planted on my estate abovementioned, were raised about three miles from the place where they now stand.

I am, Sir,

Your most obedient humble servant,

H. ANDREWS.

Wakefield, Dec. 29, 1810.

To C. TAYLOR, M. D. SEC.

CERTIFICATES.

Rasen, Dec. 25, 1810:

I, James Smith, of Rasen, in the county of Lincoln, gardener and planter, do hereby certify, that I planted the under-mentioned trees for Henry Andrews, of Wakefield,

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in

in the county of York, Esq. upon his estate at Kirkby-cum-Osgodby, near Rasen, in the county of Lincoln.

In February and March 1809. | In February and March 1810.

Black Italian Poplars	-	500	Black Italian Poplars	-	1,000
Huntingdon Willows	-	1,000	Huntingdon Willows	-	1,000
Sycamores	-	660	Ash	-	5,000
Ash	-	6,000	Oaks	-	10,000
Oaks	-	12,000	Scotch Firs	-	48,000
Scotch Firs	-	45,000	Birch	-	8,000
Birch	-	8,800	Larch	-	20,000
Larch	-	10,000	Spruce	-	20,000
Spruce	-	10,000	Alders	-	10,000
Alders	-	1,800			
					123,000
		95,760			

That out of the 95,760 trees planted in 1809, there are 63,160 trees, which are now five years old; and 32,600 trees which are now four years old; and that out of the 123,000 trees planted in 1810, there are 75,000 trees which are now four years old, and 48,000 trees which are now three years old; that they are planted on bad sandy land, not calculated to repay the expence of tillage; that the whole of the plantations are well-fenced with sod walls, five feet high, and three feet and a half thick; and lastly, that the whole of those trees are now in a healthy and thriving state. I am, &c.

JAMES SMITH.

Rasen, Dec. 24, 1810.

WE, the undersigned, do hereby certify, that we have examined the plantations at Kirkby-cum-Osgodby, near Rasen, in the county of Lincoln, belonging to HENRY ANDREWS, of Wakefield, in the county of York, Esq. and that we found the trees and fences agreeable to the above statement.

WILLIAM HARRIS,
THOMAS LAMBERT.

Mr.

Mr. ANDREWS, who had been some time indisposed, died previous to the time that notice was sent to Wakefield of the Premium being adjudged to him, and in consequence of the following letter from his widow, the Gold Medal was delivered to her for his daughters, through the hands of THOMAS PITT, Esq. Vice-President.

SIR,

I HAD the honor of receiving your favor of the 3d instant, addressed to my late husband, Mr. ANDREWS, whom I had the misfortune to lose the 14th ult. I know few things that would have given him more pleasure than the contents of your letter: he has left two daughters, co-heiresses of the estate on which the oaks are growing; if the high honor should be conferred on them which was intended for their deceased father, it will be acknowledged with grateful thanks and due respect by them, and,

Sir,

Your most obedient humble Servant,

M ANDREWS

Wakefield, May 8, 1811.

TO C. TAYLOR, M. D. SEC.

The

The GOLD MEDAL was this Session adjudged to WILLIAM CONGREVE, Esq. of Aldermaston House, Berkshire, for planting 377,520 Larches, being the Premium offered in Class 10. The following Communications were received from him.

SIR,

I WAS last year honored by the Society with a Gold Medal for having planted with acorns about seventy-three acres of land in this parish, and in the neighbouring parish of Ufton; and I have great pleasure in informing the Society, that the plantations for which I received the Medal, continue in a very flourishing state.

I now beg leave to transmit to you a Certificate of my having planted, since January 1808, 684,560 Larches, in this and the adjoining parish of Mortimer, upon one hundred and ninety acres of a poor flinty heath, which has been lately inclosed. The plants used in 1808 and 1809 were one year's seedlings, most of which came from Scotland, and were purchased in London for five shillings a thousand; but all the Larches which I planted last spring were purchased the preceding spring, and had been one year in a nursery, which is the plan I always mean to adopt in future, as I find they are much better able to contend with the heath than the seedlings. The latter also are frequently heated by their long passage from Scotland, and I once lost several thousands from this cause. On one hundred and eight acres of land in Mortimer parish, the trees were planted in rows at the distance of three feet from each other, and the plants
in

in each row at the same distance. On fifty acres in Aldermaston parish, planted in 1809, the trees were planted at six feet each way, excepting near the outsides, where they were planted only three feet asunder, and on thirty-two acres in Aldermaston, planted in 1810, they were four feet each way, which is the distance I think preferable to any other.

Small holes were made at the time of planting with a pick-axe, and the roots of the plants carefully covered and trodden down. Whenever it is ascertained that any of the plants have died, their places are immediately filled up, so that many thousands have been planted beyond the number here mentioned. I intend to plant about one hundred acres more of the same heath next Spring; and hope to extend my plantations of Larch in this neighbourhood to five or six hundred acres. In a small plantation of Larch, made in the year 1806, I measured, in October, some of the last year's shoots, and found several to exceed three feet, and one was three feet nine inches.

Should the above communication be thought worthy of notice by the Society of Arts, I shall be happy at some future time to report the progress which the plantations may make.

I have the honor to be, Sir,

Your most obedient humble Servant,

WILLIAM CONGREVE.

Aldermaston House,

Nov. 9, 1811.

To C. TAYLOR, M. D. SEC.

CERTIFICATE.

CERTIFICATE.

WE, the undersigned, having resided in the neighbourhood of the above-mentioned plantations for some years, and having had frequent opportunities of seeing them, do hereby certify, that the foregoing statement is perfectly correct; and we further certify, that all the plantations are well-fenced, and are now in a flourishing condition. In February and March 1808, three hundred and seventy-seven thousand five hundred and twenty Larches were planted on seventy-eight acres of land in Mortimer parish; in February and March 1809, one hundred and forty-five thousand two hundred Larches were planted on thirty acres of land in Mortimer; and seventy-four thousand eight hundred on fifty acres of land in Aldermaston parish; and in February and March 1810, eighty-seven thousand and forty were planted on thirty-two acres of land in Aldermaston parish.

G. H. DEANE, }
 Minister of Aldermaston; }
 W. STEPHENS;
 W. HICKMAN.

The SILVER MEDAL was this Session voted to Mr. HENRY COWLISHAW, of Mansfield, for planting 75,000 Larches, being the Premium offered in Class 11. The following Communications were received from him.

SIR,

BETWEEN the 30th of March and the 20th of April, 1808, I planted a piece of land with Larch trees; it is situated
 upon

upon Blidworth Forest, (part of Sherwood Forest), and is by admeasurement, including the fences, fourteen acres three rods.

The land being chiefly covered with heath from six to eighteen inches high, I caused a piece of the heath-sod to be pared-off with a paring-spade, of a sufficient space to plant the tree in, and the soil being very thin and near the gravel, I preferred planting the tree without turning over the soil.

The season being far advanced, and having not been sooner in possession of the land, I ordered that the roots of the trees should be made wet with water, and then rubbed over with soil, which thus adhered to the roots, and in this state they were planted in the proportion of rather more than five thousand trees upon each acre, having planted seventy-five thousand trees upon the land, which is not more than fourteen acres, allowing for the fences.

The Larch trees were two years transplanted, and from eight to fifteen inches high when planted out.

The season proved very favorable, few of the trees died, as one thousand filled up the deficiencies in the autumn of 1808, and the remainder grew well. In the autumn of 1809 they were again filled up with the same number, and I have this month supplied all the deficiencies with two thousand more, as some had been destroyed by rabbits.

The plantation is now in a healthy growing state; the last season it hath much improved.

I think the above mode preferable either to destroying the heath, (as I presume it preserves the moisture in the soil during the summer, and affords warmth in the winter), or making holes by turning up the soil, and bringing what is bad upon the surface.

I am justified in these remarks from plantations adjoining mine, where both modes have been tried, and neither have
answered

answered so well as my method. My plantation is protected by a quick fence, which was planted in 1808, and secured by good posts and rails all round; the quicks have grown very well, considering the nature of the soil, which is but barren, and they are likely to become a good fence.

I have sent you an account of the expences which have attended this plantation, and have inclosed Certificates from two of the most respectable inhabitants of the town of Blidworth, and remain, with great respect,

Sir,

Your humble and obedient Servant,

HENRY COWLISHAW.

Mansfield, Dec. 20, 1810.

To C. TAYLOR, M. D. Sec.

An Account of the Expences.

	£.	s.	d.
Purchase of the land and stamp -	200	16	0
Seventy-nine thousand Larches at 1 <i>l.</i> per thousand -	79	0	0
Posts and rails -	30	9	0
Paring, planting, and putting-down the fences -	38	0	0
Carriage of trees, &c. -	2	16	0
Cleaning the trees first and second year, where the heath in any measure incommoded them -	2	11	0
Expences of filling-up the deficiencies -	3	0	6
	356	12	6

Certificates

CERTIFICATES were received from Mr. THOMAS HANESWORTH, and Mr. JOHN HEATH, stating that they had reviewed the above-mentioned plantations, and believe the statement to be correct, and that the trees are effectually fenced and secured to grow timber, and are in a flourishing condition.

The SILVER MEDAL was this Session voted to JOHN STEPHENS, Esq. of Reading, in Berkshire; for his method of making Bricks, so as to form cheaper and firmer Buildings, and useful underground Drains. The following Communications were received from him, an Explanatory Engraving is annexed, and Specimens of the Bricks are preserved in the Society's Repository.

SIR,

I HAVE sent, for the inspection of Society of Arts, &c. three closure bricks, which on examination you will find to have been cut three fourths of the way through in the middle by a wire, and the whole of the way through at each end, which leaves the ends square and handsome for work.

The bricklayer to divide each brick in length has only to take the brick in his left hand with the mark, or cut downwards longitudinally, and by one smart blow with the trowel he will have two complete king-closures, with which he can easily make four common closures.

I have shown them to many workmen, who all approve of them. I had two hundred and fifty of them made by a brickmaker for an experiment, and I have ordered two thousand

thousand more. The builders who do the principal part of my work have had some on their own account, and have since increased their orders. I have no doubt when they are better known they will come into general use.

A considerable saving in labour and waste of bricks may be effected by their use, particularly in walls where piers are built, and where there are many openings, the work will also be rendered more substantial.

There will be a saving in room and materials where the back of a chimney is built against a straight wall, particularly in flues for low buildings.

They will be found useful in cities or large towns by being placed in partition walls instead of lath and plaster, and be a check to the ravages of fire.

They will be useful in preventing the passage of rats and mice, and the disagreeable smell occasioned when they die betwixt lath and plaster or wainscoat.

They will also answer for draining land, and will form cheaper small drains from houses than any other method.

They may be cut in other forms or directions for particular purposes according to the uses for which they are intended.

The additional expense of dividing them by the wire is about two shillings per thousand, it is generally done after they have been molded one or two days according to the dryness of the season.

I flatter myself that if this communication meets with the approbation of the Society, it will render a benefit to the public.

I am, Sir, with much esteem,

Your most obedient servant,

JOHN STEPHENS.

Reading, October 31, 1819.

TO C. TAYLOR, M. D. SEC.

DEAR

DEAR SIR,

ON inquiry from builders, I am informed, that the saving by the use of the bricks I have invented, will be from two and-a-half to nearly five per cent. in a five-window house in brick work and labour, in a front of forty feet with or without piers.

In ornamental brick piers for gateways, I think the saving of bricks by means of cutting may be very considerable, and in the labour still more, besides the work being done more sound and substantial.

I am using a few of them in an eleven-inch brick-wall, (a system hitherto entirely new,) in a westerly aspect, as a preventative or guard against the effects of weather, and it will, in point of dryness, be equal to a fourteen-inch wall. I have inclosed a letter from Benjamin Garroway, a brick-layer, who has requested me to let him have all the bricks I have of this kind, and to bespeak more for him. I have also sent a Certificate from Mr. Robert Wright, who is extensively engaged in buildings.

The drains for agricultural purposes might be done by women or children, except the digging of the drains, especially two-inch drains. With respect to longer drains, if they are required of four inches, and to be covered with brick, I would recommend the bricks to be laid anglewise, in order to promote strength in covering.

It would be of great importance if Parliament would allow a drawback of the duty on all bricks employed in draining.

Every brick intended for the operation I recommend, is taken off the stack two or three days after it is molded. It is then put on a stool or board, and a wire, about the size

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of

of No. 23, is pressed on the upper side of the brick, so as to pass through each end of it, it is then immediately placed on the stack again, and afterwards burned.

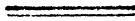
I am, Dear Sir,

Your most obedient humble servant,

JOHN STEPHENS.

Reading, December 8, 1810.

TO C. TAYLOR, M. D. SEC.



Letter from Mr. Richard Billing, to Mr. Stephens.

SIR,

AGREEABLY to your request, I have taken into consideration the utility of your closure bricks, and beg leave to say that my opinion coincides with yours, as to their advantage in new chimnies which are intended to be built against old walls. In constructing a new chimney it is generally considered absolutely necessary, that the same should be worked up close to the old wall, but completely unconnected, in order that it might settle from the old; in this case it is very desirable to make the back of the chimney as thin as possible, that it may project as little as convenient, and in building piers, particularly small ones, either for gate-ways or fronts of houses, where there are many bricks, and in the present mode which is so frequently adopted, of two-inch recesses at the exterior of the windows, your closures would be much preferable even in appearance to a brick which has been cut with a trowel, with the surface of course defaced.

Closure

Closure bricks might be adopted as a cheap and useful drain by a common brick flat, with two closures laid on the same two inches asunder, or four inches and reversed.

Your closures would be useful in all kind of ornamental brick work.

Two inches is a very desirable brick, but most times avoided in consequence of the waste in cutting common bricks, and difficulty in producing a smooth face, which would be completely obviated by the introduction of closure bricks.

I remain, Sir,

Your obedient humble servant,

RICHARD BILLING,

Reading, December 3, 1810.

To JOHN STEPHENS, Esq.



Letter from Mr. Benjamin Garroway, to Mr. Stephens.

SIR,

I AM of opinion that if closures were made for general use, two and-a half per cent. would be saved in brickwork of small piers, flues of chimneys, or where there are any bricks in ornamental works. Common bricks frequently will not cut more than one closure, and if your bricks were to be always had, they would be much more useful.

I remain, Sir,

Your humble servant,

BENJAMIN GARROWAY.

Ruscombe, December 5, 1810.

To JOHN STEPHENS, Esq.

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Letter

Letter from Mr. Robert Wright, to Mr. Stephens.

SIR,

HAVING examined your method of cutting bricks, I am of opinion that they would be particularly useful in all kinds of brickwork, make a considerable saving in labour and materials, and that a much superior bond would be obtained by your improvement.

You are perfectly at liberty to make any use you please of my opinion.

I am, Sir,

Your very obedient servant,

ROBERT WRIGHT.

*No. 5, New North-street, Red Lion-square.**London, December 6, 1810.*

TO JOHN STEPHENS, ESQ.

Description of the Drawings of Mr. Stephens method of cutting bricks for various purposes. See Plate I, Fig. 2.

Fig. 2. of plate 1, is a plan of the upper surface of a common brick, the line *aa* is a cleft cut nearly through the brick while it is soft by means of a piece of wire, as is shewn in the section, fig. 3, where the section of brick is shown at BB, placed on the wooden block A, a piece of wire *bb* with a loop

a loop at each end is pressed down into it, so as to divide it into two parts, except the part C, which the wire will not cut through because of the curvature it acquires in being pressed into the brick. A brick of this kind being burnt, may be broken in two halves by one cleft with the trowel, which will be found very useful in many cases which constantly occur in brickwork, and will be far superior to the present mode of hacking the bricks, both for the soundness and appearance of the work, and will be done in less time.

Figs. 4 and 5, shew the application of these divided bricks to draining, where A B are the ends of the two halves of a brick, and C D tiles, forming the top and bottom of the drain, this method forms a square drain.

Fig. 5, shews how a triangular drain may be made with half the number of bricks of the foregoing, that is one-half brick A, and two tiles C D.

Fig. 6, is a plan of a brick divided diagonally, and fig. 7 shews how these halves may be disposed to form a triangular drain; the letters shew the same parts in each of these two figures, the bottom D may be made of tile, or of a brick cut in half in its thickness; the scale annexed to the figures will shew the dimensions of the different drains.

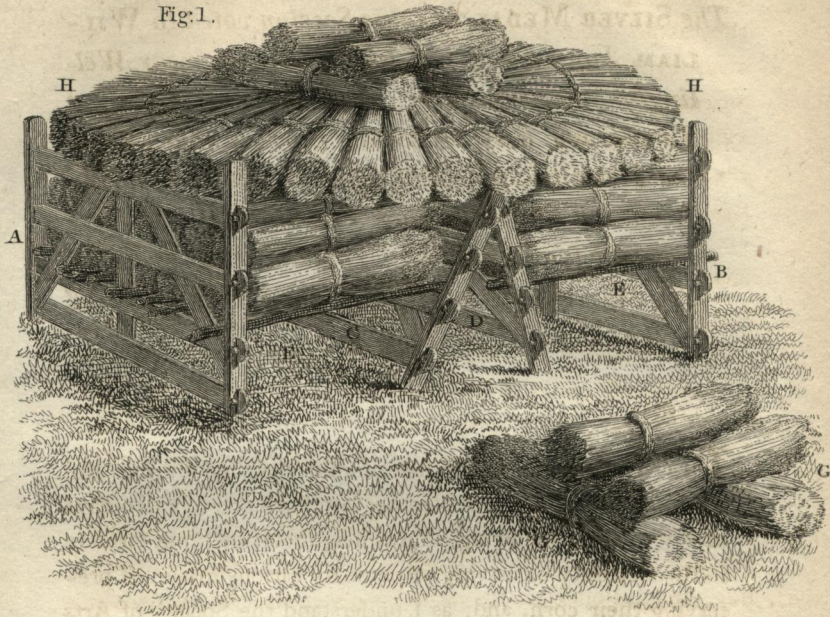
*The SILVER MEDAL was this Session voted to WILLIAM JONES, Esq. of Foxdown-Hill, near Wel-
lington, Somersetshire, for the Invention of a
Temporary Rick to secure Corn in Sheaves in
the Fields till quite dry, also Clover, Peas, and
Beans. The following Communications were
received from him, two Explanatory Engravings
are annexed, and a Model of the Rick is preserved
in the Society's Repository.*

SIR,

THE very unusual quantity of rain that fell during the months of August and September last, with scarcely two days of dry weather following, in this neighbourhood, put farmers to the necessity of having recourse to various modes of preserving their corn, and, as I understand the Society of Arts has offered a Gold Medal for the cheapest and best mode of harvesting corn, and also for making hay in wet weather, superior to any hitherto practised, I beg leave to communicate some experiments I made last summer, and the result of them. In the first place, I put some wheat in small round ricks, or wind-rows, made in the common way of this county, but afterwards recollected that the uncommon wetness of the ground might render the under part damp, I thought it prudent to examine them, (about ten days after they were set up), and found my apprehensions so well founded, that I had the whole spread abroad; and have no doubt that, if they had remained a little longer, the corn would been materially injured, not the bottom only, for it had contracted dampness a great way up the ricks, insomuch that

Foundation of Mr. W.^m Jones's Temporary Corn Rick.

Fig. 1.



Mr. Stephens's Method of dividing Bricks.

Fig. 2.

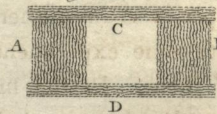
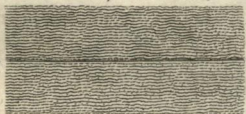


Fig. 4.

Fig. 3.

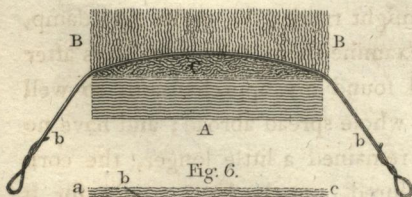


Fig. 5.

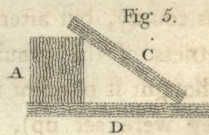


Fig. 6.

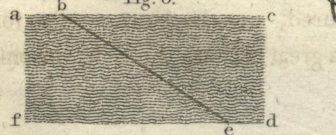
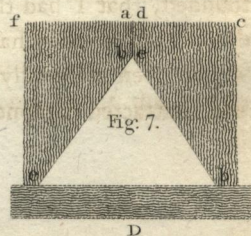


Fig. 7.



Inches 1 2 3 4 5 6 7 8 9 10

that I turned my attention to devise some better mode of preserving my barley in case the weather continued so rainy, as it afterwards proved. I had observed in some wet seasons before this, that many of our farmers, not being able to get their barley dry enough to put into a large rick, had set up narrow ricks, containing the produce of an acre or two, each in different parts of the same field it was grown, for the sake of expedition ; and though some straw was put under them, yet the bottom contracted a great degree of dampness, so as to occasion it to smell old, and the clover was killed where these ricks had stood. My object was to prevent both these injuries ; and it occurred to me, that four gate-hurdles would answer both purposes, by setting the two outside ones perpendicular, and two middle ones inclining against and supporting each other. These hurdles are usually eight feet long ; the two heads in which the four bars are mortised have pointed ends of about a foot and a half long ; the two outside ones are to be forced into the ground nearly to their full length, so that the middle brace may rest on the ground to afford some support, and the two middle was about six inches to keep them steady. The foot of the second hurdle should be set two feet from the foot of the first, the third three feet from the second, and the fourth two feet from the third, making seven feet, and occupying a space of seven feet by eight, for barley or oats, but wheat being longer in the straw, requires the distance to be wider, viz. three feet from the first to the second, three feet from the second to the third, and three feet from the third to the fourth, which will be nine feet by eight.

It will be proper to put seven or eight small stakes, (a little bigger than a man's thumb,) from the second bar of the first hurdle to the second bar of the second hurdle, and from the second bar of the third to the second bar of the fourth, to

E 4

support

support the sheaves from the ground, to admit air under and prevent injury to the growing clover; or small poles may be used extending from one outside hurdle to the other. The appearance of the ends of the hurdles will be as in the engraved plans, plate 1, fig. 1, and section plate 2, fig. 1, which shew where the small stakes are to be placed to prevent the sheaves touching the ground, for there will be but a slight pressure on them, since the ground end of the sheaves are to be put against the hurdle A B, and the ears of the corn a little elevated to rest against the hurdles C D, and the ears a little elevated against the centre hurdles C D; so that the ears of the corn will be all within side, and have the benefit of the air between C and D. It is to be observed that the hurdles C D being but six inches in the ground, and the hurdles A B nearly eighteen inches, that the two former will be a little higher than the two latter, which is necessary for two reasons, one is, that the higher these are, the higher the air is admitted to the middle of the rick, and the more they elevate the tops of the sheaves in the middle, for the ground ends should be lowest to shoot off the rain. But as it will be found that after two or three rows are placed around the tops of the hurdles, (for the ricks should be circular,) that the ground ends of the sheaves being largest) the tops will become nearly level, when it will be necessary to put four sheaves as at G G in the middle horizontally, forming a square, opening in the centre, which will admit air from the top of the middle hurdles C D, through this space to the middle of the rick, as the ears of each sheaf are just to meet only in the middle resting on these four sheaves *, which

* If the corn should be very damp, and the rick made high, four other sheaves may be put higher up to convey a greater circulation of air, and operate as a bond to connect the sheaves in the middle, so that they cannot possibly slide outwards.

will

will give such an elevation to the tops of them, that the ground ends will be sufficiently inclining downwards to shoot off any rain that may fall. In forming the roof, the sheaves are of course to be put farther in every time they are put around, till the roof terminates in a point, when two sheaves with the tops downwards spread abroad and bound with a straw-band, will secure it from a great deal of rain ; but if the corn is to remain out long, a little reed or thatch may soon be put on each rick.

Fearing I might not have been sufficiently explicit in describing this plan, it has occurred to me that it would be better to send a model, containing 100 sheaves, made to a scale of an inch to a foot, as to the length of the hurdles, the distance from each other, and the size of the sheaves, also to exemplify every particular of it.

The weather being so rainy for some days after my barley was cut, with every appearance of more rain, I determined, on having a few hours intermission of rain, to get the middle of the field, which was a little more dry than the rest, and to put it in small ricks, containing more than the produce of an acre, on these hurdles in the same field ; it was in such a damp state as to be totally spoiled in a common rick, but was taken from these ricks into a barn in the month of January last, perfectly dry, the straw much better than could have been expected, the grain good, having been proved to grow well, for having some doubt on account of being put together so damp, I had it first tried by putting a few grains in a cloth into the earth, and have since sown it, and no other this spring, and I never had a better prospect of a good crop. The remaining part of the barley that was left on the ground, was not taken in till ten days afterwards, the grain much grown, a great deal wasted by frequently turning, and the straw spoiled.

I flatter

I flatter myself it will be admitted that in wet seasons, or when harvest is so late that, as the days decrease the dews increase, and of course remain so long that there are but few hours in a day for drying, even if there should be no rain, that this method will afford perfect security to corn that is cut dry, and put up in this manner immediately from the scythe or sickle, because if there should be grass in it, the ground end of every sheaf will be without side, exposed to the sun and air to dry; and as for the grain, no part of it can get damp, because the ears but just meet in the middle, through which the air passes from the bottom to the top sufficiently to dry it. I have mentioned sheaves, because in this county barley and oats are generally bound as well as wheat, but both the former may be placed in these ricks without binding, as I had some barley put in one of them (by way of experiment,) and think it to be the better mode when there is much grass in it, by carefully keeping the ears together when carried to the hurdles, where a man is ready to put it up to another on the top, and to place the ears inwards; and it is done in as short a time as the like quantity is put on a waggon, with this advantage, that whereas a waggon with three or four horses go over the clover to the great injury of it in wet weather, by this method the corn is carried by women or children in their arms to the hurdles, without the least injury to the clover, a consideration fully adequate to a little extra expence, if any, besides that of being more expeditiously secured; for every practical farmer will be sensible in how short a time an acre of corn may be carried from the circumference of an acre to its centre. As to the time of fixing these hurdles, I have ascertained that two people can fix them in five minutes, and one rick would contain the produce of two acres of barley or oats. The other advantages, besides the corn being thus sooner secured, are, that

no

no more attendance on it is required, so that a farmer's attention may be better directed to his other harvest concerns, and that one or two of these ricks at a time, (as may be convenient,) may be taken into a barn to thrash, whereas a part of a large rick cannot be taken in without the trouble and expence of thatching the remainder, and be subject to the risk of rain before it may be covered again.

I trust it will be seen that by this plan there must be a great saving of the quantity as well as preservation of the quality of grain, which is known often times to shed a great deal by being frequently turned to get dry. Before I thought on this expedient (last barley harvest,) I am clear that a field of pease of mine required to be turned so often, that more shed out than were sown; and a farmer in this neighbourhood had a good crop of eight acres of vetches reduced to sixty bushels, by so frequently turning them for three weeks, without getting them dry at last; whereas an acre or two might have been taken up in this way a few days after they were cut, and the seed would have got sufficiently hard, but the greater part of these were so soft as to be much bruised in thrashing, and it was to be feared a great part of them would not vegetate. I had an opportunity of knowing the quantity, having the tithe of them, and proving the injury by the loss of my crop in sowing them, in so much that the land has been since ploughed.

Although I have not tried it, yet I think it is not to be doubted, but that this mode may be applied with equal advantage to clover hay, and clover seed, before it may be dry enough to put into a large rick, by being placed in this situation to dry without being so frequently turned as to deprive the hay of its finest parts, and subject the seed to great waste. In cases also when meadow hay may be dry enough to put in large cocks on the appearance of rain, how much
injury

injury do they receive by the bottom being rendered so wet as to occasion a dampness some way up, and require much time to throw abroad to dry? Whereas, in the same state of dryness, how many of such cocks may be put on four hurdles $\frac{1}{2}$, and the bottom instead of being wet and injured will be perfectly dry, having air circulating under it, and from the two middle hurdles quite to the top; if a sheaf of reed was to be drawn-up through it, as the hay got higher, a bundle of straw on top would secure it from rain, or instead of a reed-sheaf drawn-up, a couple of small faggots of wood, or three or four poles bound together and placed horizontally about the middle of the rick, to admit air at each end, and render it dry enough to be carried on to a rick without farther trouble or risk.

Hay is known to receive injury, not only from rain, but even from fervent sunshine, when nearly dry, if not frequently turned, as may be observed by the change of colour and loss of smell, which many farmers in this neighbourhood experienced in the summer of 1806, for want of hands to turn it sufficiently. I have seen a decoction of such hay made in a tea pot, and compared with a decoction of the like quantity of good hay in another, the former was very deficient both in colour and taste to the latter, and the quality of it, of course, much deteriorated.

We know that straw, particularly of barley or oats, will be much injured by being long on the ground exposed to soaking dews, and perhaps alternate rain and sunshine and may it not when protected from them by this mode, be far superior for cattle to what we are at present aware of? Besides the advantages of grain, hay, and straw, being thus better preserved, and less expence of labour than by repeatedly turning in rainy seasons, there is another advantage of no small consequence, that the crops may be removed, and
put

put on hurdles in another field, (without any hindrance to sheep feeding therein) when the land from whence they were taken may be immediately ploughed; for instance, after pease, to facilitate a better fallow, (than if delayed,) to be succeeded by wheat, and ploughing clover lays for wheat, and also preparing land for turnips after vetches, to accelerate the sowing; in which case, the delay of a few days has frequently occasioned a total loss of the crop.

It is an essential consideration, that the expence attending improvements, should not counterbalance their utility: and I flatter myself, there can be no objection to this mode on that score, because gate hurdles are useful appendages to a farm, in any county for other purposes, when not used on this occasion, and in this and other counties are requisite for dividing turnips for sheep; and, as to expedition, which is of great importance in harvest concerns, four of these hurdles (as I have already observed) may be fixed in five minutes.

If, therefore, the Society for the Encouragement of Arts, Manufactures and Commerce, instituted for the laudable purposes which it professes, should think my plan combines utility with cheapness and expedition, I should consider myself flattered by their approbation, and feel a degree of satisfaction in the reflection, that I have not turned my thoughts in vain to a subject which must be allowed to be of great importance.

I am, Sir,

Your most obedient servant,

W. JONES.

Fordown Hill, June 7th, 1810.

TO C. TAYLOR, M. D. SEC.

SIR,

SIR,

I HAVE been favoured with your letter, acknowledging your having received my model of a temporary Rick, and recommending me to send certificates of its use.

I have to add, that the barley I had put on these hurdles last year, was done in my presence, by the same man who removed it afterwards to the barn, thrashed and sowed it; he is ready to attest my former statement, of the hurdles requiring only five minutes time to fix in the ground, of the barley preserved by them growing perfectly well, with a prospect from its present appearance, of yielding a good crop; and with this further remark, that it was so damp when put upon the hurdles, that he was apprehensive it would be spoiled, and was much surprized when he took it into the barn, to find it so perfectly dry.

I notice your query, whether these hurdles could not be applied to the purpose of temporary hovels for sheep, in wet weather? I think that if two of them were fixed eight feet apart, and two others placed on the top of them, covered with straw, reed, rushes, heath or furze, they would form a covered hovel of eight feet square, and afford great protection to sheep in wet weather, (particularly just after being shorn) and ewes in the lambing season also, if some that were the most forward with lamb, were selected and put into inclosures, where one end of each hurdle might be put against a hedge, or against a wall, or end of a hovel. These hurdles, covered in like manner also, would be useful, if a number of them, proportioned to the quantity of sheep, were put in the form of a square, in any part of a field, in hot weather, to afford shade. They would induce the sheep to lie there, and answer the purpose of folding,

as they could easily be moved to such part of the field as wanted improvement, and be more at ease than when creeping under hedges, to the no small detriment of their wool.

I have to report to the Society, that I have this harvest made use of the hurdles on a larger scale, viz. to keep raking wheat separate from the sheaf, and which was too damp to put in sheaf; and also in small ricks of wheat for seed, to save the trouble of taking it from a larger rick, before the whole was wanted to be thrashed; and for my tithe wheat, that was not sufficiently dry to put into a barn.

I had also five acres of white pease, which were drilled where a crop of vetches had failed, so late as the 12th of May; they proved to be a very great crop, but they ripened so late, and the tops of the haulm were so green, from having shot out to an extraordinary length, that they were not all carried till the 27th of last month. At one time I almost despaired of ever getting them dry, owing to the heavy dews which fell during the night, and continued during most of the day, so as to afford but a few hours to dry my crop. I therefore took up six waggon loads from the middle of the field, on the 25th of last month, and put them on twelve gate hurdles adjoining each other, for the purpose of making one roof, and set the hurdles in the manner of my ricks. The first two loads were put on four of these hurdles at one end, which would contain four loads if necessary; the next two on the adjoining four hurdles; and the other two loads on the four remaining hurdles; so that though these three ricks were close to each other, yet being set up separately, they admitted air between each, from the bottom to the top, and yet adjoined sufficiently to make one continued roof to be thatched together.

When these six loads were removed from the field, I had
room

room to turn the remaining parcels towards each other, and more towards the middle of the field, so as to have more air to dry. But they were not sufficiently dry till the 27th, when they were carried to another set of sixteen hurdles ready to take them, and each waggon load laid over the whole length of 16 hurdles, not being so damp as to require being carried up in separate ricks, as the former six loads. Some of these pease have been already thrashed, and prove to be in very good condition, as also the haulm, which is perfectly dry and sweet for cattle.

One of these ricks of pease, and probably some of the ricks of wheat, will not be taken in till the month of February next: they may therefore be inspected by any member of the Society, who may visit this neighbourhood.

I have inclosed a certificate from Mr. Waldron, a gentleman of this parish, who farms his own estate; and another certificate from Mr. Hewitt, also of this parish, who is esteemed a respectable and intelligent farmer: he rents a farm from Mr. Ware, brother to Mr. Ware of the house of Ware, Bruce and Co. London.

I am, Sir,

Your most obedient servant,

W. JONES.

Fordown Hill, Oct. 30th, 1810.

TO C. TAYLOR, M. D. SEC.

CERTIFICATES.

THIS is to certify, that I have seen some barley on Mr. Jones's farm at Culway, in the parish of Wellington, set upon gate hurdles in the harvest of 1809, which appeared
to

to me to be a very good method to secure grain in wet seasons, or when the dews remain so long on the ground, that it cannot be got sufficiently dry to put together on other ricks. I have also seen a field of barley at Mr. Jones's this year, adjoining to my farm, sown with some of the barley put on those hurdles, which grows well, and is likely to prove a good crop; and I think this invention of public utility.

HENRY WALDRON.

THIS is to certify, that I have seen since this harvest, on Mr. Jones's farm at Foxdown Hill, in the parish of Wellington, three ricks of wheat, and two ricks of pease, set upon gate hurdles, which appears to me a very good method to secure grain in wet seasons, or when the dews remain long on the ground; that I have attentively examined those ricks, and consider it to be a public benefit that a farmer may have recourse to so cheap and expeditious a method of securing his corn in difficult seasons; whereby he is able to put it together sooner, and of course expose it less to the weather.

JAMES HEWETT.

Wellington, Oct. 23th, 1810.

SIR,

AGREEABLY to your request, I lose no time to give you the information you desire, respecting the temporary corn rick, and the size they may be made. The space between

F

the

the two outside hurdles, contains about sixty sheaves on each side, or one hundred and twenty in the whole, to reach the top of the hurdles.

Every round of sheaves afterwards takes forty sheaves or upwards, say fifteen rounds high, which makes six hundred sheaves, and which will raise the rick about eight feet from the tops of the hurdles.

It will require about seventy sheaves from the top of the above fifteen rounds, to the top of the conic roof.

Four sheaves crossing each other, five times in the centre of the rick, will form in the whole twenty, making as follows :

- 120 Sheaves to the top of the hurdles.
 - 600 Sheaves from the tops of the hurdles, to the commencement of the roof.
 - 72 Sheaves in the conical roofs.
 - 20 Sheaves in the cross or bonds of the rick.
-
- 812 Sheaves, or upwards of 81 shocks in each rick, which is more than the average produce of an acre.

The wheat in this part of the country is reaped near to the ground, and my sheaves this year, are about $4\frac{1}{2}$ feet long, for which the distance of 3 feet $2\frac{1}{2}$ inches between the outer hurdles, and 3 feet between the inner hurdles, is calculated. The distance should be regulated by the length of the sheaves of barley and oats. When shorter than four feet, the rick should be oblong instead of round.

Faggots of wood, placed at intervals within the rick, will be found particularly useful, where pease, vetches, clover, hay seeds

seeds and meadow hay, are put into these ricks, as the faggots will promote a greater circulation of air.

The number of the cross sheaves, should be according to the dampness or dryness of the corn, either in every row, or every second or third row.

*Reference to Plate 2, Fig. 1, the Section of Mr.
Jones's Temporary Corn Rick.*

THE letters describing the same parts of the construction of the rick, agree with those in plate 1.

AB, being the two upright outside hurdles.

CD, the two inclined hurdles.

EE, the poles or sticks on which the sheaves are to be first placed on commencing the rick, and which cross the hurdles.

HHHH, the sheaves composing the body of the stack.

II, the conical roof, the lower part of which projects sufficiently over the body of the rick, to cover it from wet, and in this roof, each round of sheaves are to be placed, so as to cover the ears of the sheaves below, and gradually rise to nearly a point, over which a bundle, containing two or three sheaves, with the butt ends upwards, and tied together, cover the centre or uppermost point of the rick.

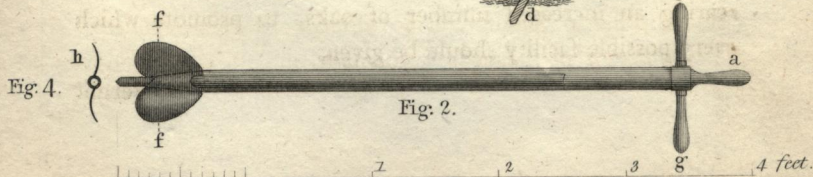
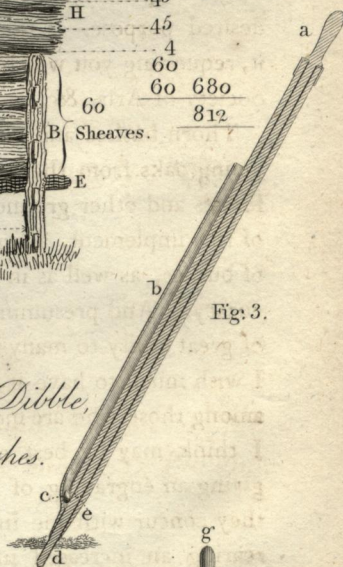
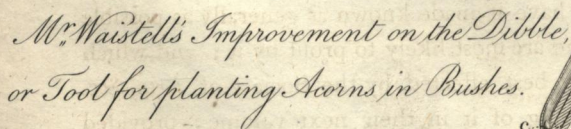
The Society are indebted to Mr. CHARLES WAISTELL, of High Holborn, for the following valuable Communication and Improvement, on an Acorn Dibble in the Society's Possession. An Explanatory Engraving is annexed, the original Dibble is in the Society's Repository, and Mr. WAISTELL's Drawing is preserved in their Library.

SIR,

IN consequence of information that Government wanted intelligence respecting the best mode of dibbling acorns, I have made an improvement on the acorn dibble in the Society's Repository, which I presume will answer well the desired purpose. I therefore send herewith a drawing of it, requesting you will have the goodness to lay it before the Society of Arts, &c.

Thorn bushes and thickets are the natural guardians of young oaks from the depredations of cattle of all kinds, on forests and other grounds on which they pasture. By means of this implement, acorns may be deposited in the interior of bushes, as well as in open grounds, with rapidity and accuracy. And presuming that such an implement would be of great utility to many individuals, and also to Government, I wish much to have it made known as generally as possible among those who are most likely to profit by it; and which I think may be best effected by the Society of Arts, &c. giving an engraving of it in their next volume; provided they concur with me in thinking it may be the means of rearing an increased number of oaks, to promote which every possible facility should be given.

Permit



Permit me on this occasion to observe, that many proprietors of landed property are not sufficiently aware that a greater or less proportion of almost every estate, would, if judiciously planted, pay the proprietor much more than the rent it could be let for to a farmer. It would, therefore, give me great pleasure to see in the Society's volumes more communications from successful planters. I trust there are numerous persons of this description who want only to be reminded, how greatly they might benefit individuals, as well as their country, by publishing, or communicating to you, such well ascertained facts of their success as planters, as they may be in possession of; and in order to direct their attention to the nature of the information that is chiefly wanted, I beg leave to refer them to pages 80 and 81 of the Society's 27th volume, wherein numerous particulars respecting the planting, management and produce of woods, are enumerated.

I am, Sir,

Your obedient servant,

CHARLES WAISTELL.

No. 99, High Holborn,
June 12, 1811.

To C. TAYLOR, M. D. Sec.

*Reference to the Engravings and Section of Mr.
Waistell's Improvement of the Dibble for Planting
Acorns. Plate 2, Fig. 2, 3 and 4.*

a represents the handle of the dibble, which dibble is a rod $\frac{3}{4}$ of an inch in diameter, moveable in the tube of a

F 3

stave

stave, which stave is externally about two inches diameter, *b* a tin or metal tube fixed on the exterior part of the stave, and of the same bore or aperture of the tube of the stave; when a hole is made in the earth by the point of the dibble *d*, the acorn is dropped down the metal tube, and on drawing up the dibble by its handle to the height of the letter *e*, the acorn *c* passes through a large opening into the dibble tube, and from thence falls into the hole made by the point of the dibble in the earth, when by moving backwards and forwards the cross handles *g g*, fixed on the top of the hollow stave, the soil surrounding the hole in the earth is loosened by the iron wings *f f* and deposited on the acorn. Fig. 4, *h* shows a section of the iron wings *f f* belonging to the bottom of the hollow stave.

Supposing that you wish to plant an acorn in the middle of any bush, you are to press the instrument through it into the ground, make a hole in the earth by the point of the dibble rod, then raise the rod above the hole where the two tubes communicate, drop the acorn down the tube *b*, which falls immediately through it and the lower part of the stave tube into the hole previously made by the rod, which hole is instantly covered by the soil raised by the wings. The dibble rod may be occasionally passed down the metal tube to be certain of its being perfectly clear.

The

The THANKS of the Society were this Session voted to H. B. WAY, Esq. of Bridport Harbour, for the following Communications on the Culture and Preparation of Hemp in Dorsetshire and on the Growth of Sea Cale.

DEAR SIR,

As you informed me when you was lately in Dorsetshire, that the Society of Arts, &c. were anxious to obtain information concerning the culture and preparation of hemp in this neighbourhood, I am induced to send you some accounts thereof.

I fear my memorandums on the subject will not be worthy the notice of the Society, and I should scarcely have ventured to have put pen to paper upon it, if I had not uniformly found, that the persons who are concerned in the growth and management of that article, are shy of giving information. If what I have sent should induce persons equal to the task, to make the needfull enquiries in this county, Somerset, Suffolk and Norfolk, (which I believe to be the parts of England where hemp is most cultivated,) and make the culture more generally known than it now seems to be, I shall be much gratified. I hope, if you again visit this neighbourhood, to show you a very fine crop of wheat on the field where you last year saw the persons employed in collecting the male hemp; also another large field of exceeding good wheat, that produced hemp last year, neither of which have had any fresh manure upon them, since the hemp was taken from the fields. I have added some observations on the growth of Sea Cale: this

useful vegetable, growing naturally on some of the Cliffs near Bridport Harbour, and being one of the most valuable esculent plants that I know, I have found the culture of it in the kitchen garden more easy to manage than has been generally supposed.

I have sent different specimens of the seed, and some of the natural soil, for inspection ;

And remain, Dear Sir,

Your friend and obedient Servant,

H. B. WAY.

Bridport Harbour, March 1st, 1811.

TO C. TAYLOR, M. D. SEC.

*Account of the Culture and Preparation of Hemp in
Dorsetshire.*

HEMP is usually sown about the 15th of May, on the best arable land, on which about twenty cart load of good rotten dung has been spread, say about a ton to the load ; this is well ploughed in, and the ground well ploughed two or three times, and well dragged and harrowed, to get the soil as fine as possible, and about two, or two and a half bushels of seed sown to the acre ; what produces no seed, called by some male or summer hemp, and by others cinner hemp, is drawn about five or six weeks after the plant comes up, it is at that time in blossom ; when drawn, it is tied up in bundles, and carried to some meadow land, and there spread to ripen : when ripe and dry, it is bundled and stacked. What stands for seed has no flower that can be discovered ;

discovered; it is the female hemp, and is generally ripe early in September, when it is drawn, bundled up, and stowed up in the field for the seed to dry and harden, when it is thrashed out in the fields. Most commonly in Dorset the seed is sold on the spot, at from 2*s.* 6*d.* to 7*s.* per bushel; an acre of hemp produces eighteen or twenty bushels. In Somerset they have sometimes thirty bushels of seed to the acre. In the sowing season I have known 21*s.* per bushel paid for seed; when thrashed the hemp is carried to the meadows, and spread to ripen as the other, and stacked in the same way, to prepare it for sale; it is sent to the houses of the poor in the parishes round which it is raised, to be what is called scaled, that is, each separate stalk of hemp is broken in the hand, and the hemp which is the outside rind or bark, is stripped off, in which state it is sent to market. The scaling is the employment of old men, women and children, and of the whole of the labouring family in the evening, as in winter they make but poor wages of it, and one principal inducement for them to do it is, that the woody parts of the hemp make them a fire, but it soon burns out. Complaints are made of a great deal of the hemp being often wasted from improper management, and want of care in the scaling of it; at the Comptons and Bradford, a good deal more hemp would be raised if they could get it scaled, which they find much difficulty in doing; and if it were possible to construct a mill that would swingle it at a moderate expence, on some such plan as the flax swingling mills, and to afford some encouragement to the erecting them, as well as flax swingling mills, it would encourage the growth of both articles materially; an acre of hemp in a good season will produce 14, 16 or 18 weights, of 32 lb. to the weight in Dorsetshire; in Somersetshire they reckon their weight two pounds less, and they some-
times

times get as much as 35 weights to the acre; the price of the weight of hemp is from 16 s. to 20 s. per weight. The rotation of crops as follow :

On ground well manured,	Hemp.
	Wheat.
	Barley or Oats.
	Clover with the above.
	Wheat.
Ground well manured,	Barley or Oats.
	Hemp.

But sometimes they dress the ground well for hemp every third year. The quantity of hemp sown in Dorset, is very trifling in comparison to what is sown in Somerset. In the former it is chiefly confined to eight or nine parishes; whereas very large quantities are raised in Somerset, in the parishes of Misterton, Crewkerne, Hinton, St. George, Lopen, Seavingtons, Ilminster, Stocklinch, Donyatt, Kingstone, Shipton, Beauchamp, Barington, South Petherton, Martlock, Norton, Chiselborough, Stoke-under-ham, Montacute, Odcombe, the Chinniocks, the Cokers, the Comptons, Bradford, and a great many other parishes. Mr. Emanuel Pester, of Preston, near Yeovil, is in the middle of the hemp and flax county, and he can doubtless obtain and give every information that may be wished on the subject, being so extensively engaged in agricultural pursuits himself, and so competent to give that sort of information wanted; a Bounty of 3*d.* per stone on hemp, and 4*d.* per stone on flax, was for many years given by Government, but is now discontinued; it was paid by the Clerk of the Peace for the counties, and as the late Mr. Wallace managed that for the county of Dorset uncommonly well, it is most probable that a
very

very correct return for the county of Dorset could be obtained from the office of the Clerk of the Peace for this county, of the quantity raised each year of both articles, during the continuance of the Bounty; also from Devon and Somerset similar returns could be got. There are large quantities of hemp raised in Suffolk, the writer thinks, near St. Edmunds Bury and Stow market, in that county. He has been told they make linen so fine of hemp, as to be worth 5 s. and 6 s. per yard, and used for shirts in preference to Irish, being considered much more durable and better, so much so, as to induce the Irish to imitate the fabric, and stamp the cloth, Suffolk Hemp. It is also raised in Norfolk, in the neighbourhood of Lynn and Wisbeach, but it must be watered and prepared in some other way; indeed he is convinced that all the hemp imported from the Baltic, is prepared differently from the mode used in Dorset and Somerset, and must have been swingled before it was sent to the different ports it was shipped at for this country. The giving the former Bounty on the growth, and increasing it on hemp and flax, would encourage the growth, but if given on the number of acres sown, the grower, as his ground would be in high order for a crop of turnips and wheat after, might be careless about his crop of hemp, as the Bounty to be worth notice, must be worth more than the value of the seed in common years and the labour of sowing.

Hemp in this county and the next is never sown in new ground fresh broke up, but flax always by choice, when fresh ground can be got. Mr. John Pitfield is going to break up great part of the West Clift at Bridport Harbour, and sow it with flax this season. The writer, while on the subject of hemp, is led to mention, that when travelling in
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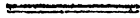
the year 1792, in the province of Massachusetts near Boston, in North America, was assured that considerable quantities of hemp were raised in the township of Sunberry, about ten miles from Boston, and that it was always raised on the same ground every year, no other crop being sown in their hemp lands, and that it was manured every year, at the rate of about ten tons of manure to the acre of hemp. Respecting seed, he cannot learn that there is any for sale at Bridport, with the buyers who purchase it up for the growers at the hemp harvest, and he expects that very little can be got from the growers round here. Somersetshire is a more likely place to get it, as he has known some of the hemp farmers to have upwards of an hundred acres of hemp in one season; round this they generally are only in a small way. A change of hemp-seed is much wanted in Somerset and Dorset. Trials have been made two or three times to get it from Russia, but it is not possible to get new seed from the interior early enough in the fall at the shipping ports, and some old seed which has been shipped has not answered the purpose; if new could have been got, it would as generally have been used for a change, as the new Riga barrel flax seed is by the flax-growers. As the seed sown in Russia was considered a good sample, and its appearance much liked, possibly it might, at a future period, be obtained in the fall from Odesa, or some other port on the Black Sea, as it is understood that a good deal of hemp shipped at Riga and St. Petersburg, grows much nearer to the Black Sea than the Baltic; or possibly the seed of the Italian hemp raised in the neighbourhood of Bologna, or that of America, might be obtained in time to answer. Perhaps tares, called by some vetches, might be cleared from the ground early enough for manuring and sowing the ensuing crop of hemp,
and

and vetches might make it worth the farmer's attention ; to this an objection was stated, which I do not just now remember. On talking with the gentleman before-mentioned, and stating the American practice, with what had passed on it with my neighbours, he said, he had long been persuaded that it was a good practice, and that he had the last season a very good crop of hemp on a piece of ground that had hemp the year before, and that he did not let the hemp stand for seed, but had it all down at the usual time for drawing the summer or male hemp, and the ground immediately sown with turneps, which were fed-off with sheep, and the ground then slightly manured, and hemp sown again at the proper season, and that he had then, October 27, 1808, a piece of turneps after his hemp, which were worth 6 *l.* per acre. It is to be observed, that the acre here meant is the British acre of one hundred square poles, three hundred and four square yards each. The manure mostly used for hemp is good rotten stable dung, which is much preferred to any other, though lime is frequently used ; but manufacturers pretend to assert, (with what foundation I cannot say), that they can distinguish a material difference in the quality of the hemp, where lime has been used instead of dung, as from lime they say hemp is more harsh and brittle, and not of such a soft silky quality as where dung has been used. The writer has endeavoured to throw together every thing that occurs to him on the subject of the culture of hemp, which, from being born and residing great part of his life in a part of the county where it has been extensively cultivated for ages, he has been able to collect ; but where it is not very easy to obtain direct information, as both the growers and manufacturers are very shy of giving any, under an idea that it might injure their own interest by assisting to extend the

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the culture to other countries. He believes that his statement may be depended upon, but he is no farmer, and therefore the loose hints thrown together here on the subject may not be so clearly and satisfactorily explained as he could wish, but if they in the smallest degree assist in encouraging the growth of an article so essential to the welfare and prosperity of the kingdom, it will afford him the most heartfelt pleasure.

H. B. WAY.



Account of the Culture of Sea-Cale, or Sea-Kale.

THE mode which I consider the best for the culture of sea-cale, is to draw lines in a very dry soil and dry situation, on ground with a southern aspect, about two feet one way by about eighteen inches the other, and where the lines cross to put in three or four good perfect seeds in a square or triangle, about three inches apart; this may be done any time in November or December in open weather, and it will require no other care afterwards but keeping the ground clear from weeds till the autumn of the following year, when all the plants but one of the finest in each square may be taken up, which if wanted will serve to form other beds set the same distance apart. The ground in the intervals of the plants should be dug in the spring and fall of the year, taking care not to injure the plants. The leaves should be left on the plants till they fall off naturally, which will not in general be sooner than the latter end of November. In the
autumn

autumn of the second year the same attention should be paid to the plants, and to remove the dead leaves.

In the third year, about the middle or latter end of November, when the leaves have been cleared away, and the ground dug, each plant should be covered over close with a tub, pan, a heap of small stones, coarse cinders, or coarse bark, raised about ten or twelve inches over the crown of each plant, and from about the latter end of February to the latter end of March the plants will be very fine and fit for use. I prefer that which has been bleached with our round sea-gravel, about the size of large peas or beans, to any other mode whatever. The plants should be cut but once in a year, as cutting it oftener weakens and lessens the size of the plants. If it is not desired to have the plants large they may be bleached and cut a year sooner.

I have sent a specimen of the sandy soil in which it grows naturally here, as I think the generality of gardeners are too careful, and manure the ground too highly for it. In the month of April last, after cutting my plants, I covered the ground all over, at least six inches above the crown of the plants, with this earth, they soon shot up through it, and never looked finer or produced a larger quantity of good seed than that year.

I am thus particular in order to show that this vegetable will succeed as well, if not better, in poor ground than in rich, provided the soil be dry, and care taken in the management; I speak from long experience, having been well acquainted with the management of this valuable plant from my youth. When I cut the sea-calc for use, I immediately draw up the earth with a trowel, so as completely to cover the whole of the plant; this I fancy makes them grow more luxuriantly. This plant, if properly managed, is superior to
asparagus

asparagus, and if more is cut than wanted for immediate use, it will keep for some days in a pan of cold water, but of course it cannot be better than when recently cut. It precedes the use of asparagus, being ready for the table in February and March.

H. B. WAY,